

# Papers by Bell Laboratories Authors

## BIOLOGY

**<sup>31</sup>P Nuclear Magnetic Resonance Studies O-Ehrlich Ascites Tumor Cells.** G. Navon, S. Ogawa, R. G. Shulman, T. Yamane, *Proc. Natl. Acad. Sci.*, 74 (January 1977), pp. 87-91.

## CHEMISTRY

**Picosecond Dynamics of Azulene.** E. P. Ippen, C. V. Shank, R. L. Woerner, *Chem. Phys. Lett.*, 46, No. 1 (February 15, 1977), pp. 20-23.

**Is Samarium Metal in an Intermediate Valence State?** G. K. Wertheim, M. Campagna, *Chem. Phys. Lett.*, 47 (1977), pp. 182-184.

**The Radiofrequency Discharge Chemistry of Benzene and Mixtures with Helium, Argon, and Xenon.** G. Smolinsky, M. J. Vasile, *Int. J. Mass Spectrom. Ion Phys.*, 24 (1977), pp. 311-322.

**The Nature and Effects of Platinum in Perovskite Catalysts.** D. W. Johnson, Jr., P. K. Gallagher, G. K. Wertheim, E. M. Vogel, *J. Catal.*, 48 (1977), pp. 87-97.

**Oxidation of Ni<sub>3</sub>Sa<sub>4</sub>, Metastable SaNi, Ni<sub>3</sub>Sa<sub>2</sub> and Ni<sub>3</sub>Sa<sub>1</sub>.** H. G. Tomkins, J. E. Bennett, *J. Electrochem. Soc.*, 124, No. 4 (April 1977), pp. 621-623.

**X-Ray Absorption Studies of Halide Binding to Carbonic Anhydrase.** G. E. Brown, G. Navon, R. G. Shulman, *Proc. Nat. Acad. Sci.*, 74 (May 1977), pp. 1794-1797.

## ELECTRICAL AND ELECTRONIC ENGINEERING

**Solid State Electronics: Scientific Basis for Future Advances.** J. A. Giordmaine, *Sci. Compendium*, 195 (March 18, 1977), pp. 1235-1240.

**Noise Performance of Microwave GaAs FET Amplifiers at Low Temperatures.** R. E. Miller, T. C. Phillips, D. E. Iglesias, R. H. Knerr, *Electron Lett.*, 13 (January 6, 1977), pp. 10-11.

**Image Contour Extraction with Analog MOS Circuit Techniques.** P. I. Siciu, D. A. Hodges, *IEEE J. Solid State Circuits*, SC-12 (February 1977), pp. 65-72.

**On Quantizers for DPCM Coding of Picture Signals.** A. N. Netravali, *IEEE Trans. Inform. Theory*, IT-23, No. 3 (May 1977), pp. 360-370.

**Geometrical Factors in Avalanche Punch-Through Erase.** J. R. Brews, *IEEE Trans. Electron Dev.*, ED-24 (August 1977), pp. 1108-1116.

**Simultaneous Phase Tracking and Detection in Data Transmission Over Noisy Dispersive Channels.** F. R. Magee, Jr., *IEEE Trans. Commun.*, COM-25 (July 1977), pp. 712-715.

**Rain-Scatter Interference on an Earth-Space Path.** T. S. Chu, *IEEE Trans. Ant. Propag.*, AP-25 (March 1977), pp. 287-288.

**DC Thermal Model of Semiconductor Device Produces Current Filaments as Stable Current Distributions.** Hilding M. Olson, *IEEE Trans. Electron Dev.*, ED-24 (September 1977), pp. 1177-1184.

**Laser Coding of Bipolar Read Only Memories.** J. C. North, W. W. Weick, *IEEE J. of Solid State Circuits*, SC-11, No. 4 (August 1976), pp. 500-505.

**Rank Reduction of Ill-Conditioned Matrices in Waveguide Junction Problems.** Douglas N. Zuckerman, Paul Diamant, *IEEE Trans. Micro. Theory Tech.*, *MTT-25* (July 1977), pp. 613-619.

**On Low-Sensitivity Realizations of Band-Elimination Active Filters.** Renato N. Gadenz, *IEEE Trans. Circuits Syst.*, *CAS-24*, No. 4 (April 1977), pp. 175-183.

## **MATERIALS SCIENCE**

**A Simplified High Frequency MOS Capacitance Formula.** J. R. Brews, *Solid State Electron.*, *20* (1977), pp. 607-608.

**Giant Core-Exciton Effects on Si(111)  $7 \times 7$  Surfaces.** G. Margaritondo, J. E. Rowe, *Phys. Lett.*, *59A* (January 10, 1977), pp. 464-466.

**Near Infrared Sources in the 1-1.3  $\mu\text{m}$  Region by Efficient Stimulated Raman Emission in Glass Fibers.** C. Lin, L. G. Cohen, R. H. Stolen, G. W. Tasker, and W. G. French, *Opt. Commun.*, *20*, No. 3 (March 1977), pp. 426-428.

**Dispersion of Electronic Surface Resonances and Crystal Surface Structure.** E. G. McRae, J. M. Landwehr, C. W. Caldwell, *Phys Rev Lett*, *38* (June 13, 1977), pp. 1422-1425.

**Theoretical Modeling of the Simultaneous Exposure and Development (SED) Process of a Positive Photoresist.** W. T. Tsang, *Appl. Opt.*, *16* (July 1977), pp. 1918-1930.

**Dependence of Residual Damage on Temperature During  $\text{Ar}^+$  Sputter Cleaning of Silicon.** J. C. Bean, G. E. Becker, P. M. Petroff, T. E. Seidel, *J. Appl. Phys.*, *48* (March 1977), pp. 907-913.

**The Loading Effect in Plasma Etching.** C. J. Mogab, *J. Electrochem. Soc.*, *124* (August 1977), pp. 1262-1268.

**Demagnetization of the Ni(100) Surface by Hydrogen Absorption.** M. Landolt, M. Campagna, *Phys. Rev. Lett.*, *39* (August 29, 1977), pp. 568-570.

**The Anomalous Behavior of  $\text{TiSe}_2$  and the Excitonic Insulator Mechanism.** J. A. Wilson, S. Mahajan, *Commun. Phys.*, *2* (1977), pp. 23-29.

**Computer Model of Spin Glasses.** L. R. Walker, R. E. Walstedt, *38*, No. 9 (February 28, 1977), pp. 514-518.

**The Copolymerization of Styrene with Sulfur Dioxide. Determination of the Monomer Sequence Distribution by Carbon-13 NMR.** R. E. Cais, J. H. O'Donnell, F. A. Bovey, *Macromolecules*, *10*, No. 2 (March-April 1977), pp. 254-260.

**A Model for the Formation of Oxidation Induced Stacking Faults In Silicon.** S. Mahajan, G. A. Rozgonyi, D. Brasen, *Appl. Phys. Lett.*, *30* (January 1977), pp. 73-75.

**A Quantitative Model for the Diffusion of Phosphorus in Silicon and the Emitter Dip Effect.** R. B. Fan, J. C. C. Tasi, *J. Electrochem. Soc.*, *124* (July 1977), pp. 1107-1118.

**A Method of Tungsten Dopant Deposition for Dual-Dielectric Charge-Storage Cells.** J. R. Ligenza, D. Kahng, M. P. Lepselter, E. Lahate, *IEEE Trans. Electron. Dev.*, *ED-24*, No. 5 (May 1977), pp. 581-583.

**The Tetragonal Deformation of the  $\text{TiO}_6$  Octahedron in Ferroelectric  $\text{PbTiO}_3$ .** J. G. Bergman, G. R. Crane, E. H. Turner, *J. Solid State Chem.*, *21* (1977) pp. 127-133.

**Absolute Configuration of Piezoelectrics: A Bibliography II.** D. T. Hawkins, *Ferroelectrics*, *15* (1977) pp. 77-96.

## PHYSICS

**Relaxation of Tunneling States in Fused Silica.** J. E. Graebner, Brage Golding, Bull. Amer. Phys. Soc., 22 (March 1977) p. 310.

**Feedback Stabilization of Optically Levitated Particles.** A. Ashkin, J. M. Dziedzic, Appl. Phys. Lett., 30, No. 4 (February 15, 1977), pp. 202-204.

**Polarization Rotation Effects in Atomic Sodium Vapor.** P. F. Liao, G. C. Bjorklund, Phys. Rev., 15, No. 5 (May 1977), pp. 2009-2018.

**Condensation of Optically Excited Carriers in CdS: Determination of EHL Phase Diagram.** R. F. Leheny, Jagdeep Shah, Phys. Rev. Lett., 38, No. 9 (February 28, 1977), pp. 511-514.

**Observation of the Two-Dimensional Plasmon in Silicon Inversion Layers.** S. J. Allen, Jr., D. C. Tsui, R. A. Logan, Phys. Rev. Lett., 38, No. 7 (April 25, 1977), pp. 980-983.

**AC Stark Splitting of Two-Photon Spectra.** J. E. Bjorkholm, P. F. Liao, Opt. Commun., 21 No. 1 (April 1977) pp. 132-136.

**Critical Nuclear Magnetic Relaxation in a Strong Itinerant.** M. Shaham, J. Barak, U. El-Hanany, W. W. Warren, Jr., Phys. Rev. Lett., 39 (August 29, 1977), pp. 570-574.

**Torsional Waves in a Sapphire Rod at Low Frequencies.** Robert N. Thurston, Lynn O. Wilson, IEEE Trans. Son. Ultrason., SU-24 (September 1977), pp. 305-312.

**Normal Photoemission Demonstration of Two and Three Dimensionality of Electron States in Layer Compounds.** P. K. Larsen, M. Schluter, N. V. Smith, Solid State Commun., 21 (February 1977), pp. 775-778.

**Measurement of the Fine Structure Splitting of the 4F State in Sodium Using Two-Photon Spectroscopy with a Resonant Intermediate State.** P. F. Liao, J. E. Bjorkholm, Phys. Rev. Lett., 36, No. 26 (June 28, 1977), pp. 1543-1545.

